obtains a counter frequency variation of reflection coefficient of high-frequency power for each of said antennas, and a plasma absorption frequency appearing at the same frequency in the counter frequency variations is obtained as a plasma surface wave resonance frequency.

18. A plasma density information measuring apparatus according to claim 17, wherein a plasma density information measuring probe is inserted in a chamber which generates plasma for forward and backward movement, and said probe is moved such that a tip end of said probe is pulled backward from a measuring position in said chamber to a retreat position in the vicinity of a wall surface of said chamber when measurement is not carried out.

19. A plasma density information measuring apparatus according to claim 17, wherein protecting means for blocking excessive plasma generating high-frequency power which enters said antenna in said probe is provided behind said plasma density information measuring probe.